

Work Order ID 54438

December 9, 2009 11:28:02 AM



Page 1

Item ID: D3304-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Tube Assembly

Start Date: 09/12/2009 Start Qty: 20.00



Cust Item ID:

Required Date: 16/12/2009 Req'd Qty: 20.00



Customer:

Reference:

Run Start



Approvals:

Process Plan:

RL

Date:

09-29

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D3304

Rev B

100



Bandsaw

Jeaspa Bandsaw

BAND SAW

Memo

Cut to length

0.00

0.00

DIR 09/12/13

20

110



Lathe Conv

Conventional Lathe

CONVENTIONAL LATHE

Memo

Cut blank: 15.75" as per Dwg D3304 □ Turn as per Dwg D3304 □ Identify as D3304-1

0.00

0.00

mmf 09/12/16

20

8

120



QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

0.00

0.00


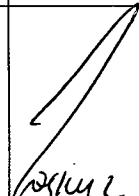
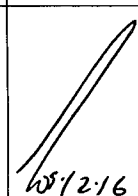
mmf 09/12/16

20

2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3304-041 PAR #: _____ Fault Category: Machining NCR: (Yes) No DQA: _____ Date: 10-02-11
 Resolution: Scrap Disposition: Scrap QA: N/C Closed: HS Date: 10/02/11

NCR: 54438		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
09/12/15	110	stock Tube (110472) 875W.065) is to cracked to machine in the teeth. 2 piece. Either shipping/stock/storage. R.C. process		scrap and replace B 110472 x 2 I.D. material for tooling use only.	09/12/16 mm	S 10/02/11		

NOTE: Date & initial all entries

Work Order ID 54438

December 9, 2009 11:28:02 AM



Page 2

Item ID: D3304-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Tube Assembly

Start Date: 09/12/2009 Start Qty: 20.00



Cust Item ID:

Required Date: 16/12/2009 Req'd Qty: 20.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

QC8- Inspect parts - second check

0.00

SA 09/12/16

20

φ



QC

Memo

0.00

Quality Control

140

Small Fab

0.00

0.00



Small Fab

Memo

Deburr / Drill as per Dwg D3304 using drill Jig D3304-T1 Deburr

x20

09/12/22

Small Fab

150

QC5- Inspect part completeness to step on W/O

0.00

0.00

2) S 10/01/04

counter
x20

f



QC

Memo

Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

December 9, 2009 11:28:02 AM



Accept

**Setup Start**

Stop

**Cust Item ID:**

1 11111111 111111 111111 111111



Customer:

Reference:

Run Start



Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

**Insp.
Stamp**

0.00



Large Fab

Memo

0.00

EL x 8 90-1-5

20

P/L 10/02/01

Large Fab

Weld bracket as per Dwg D3304 and QSI 004

QC9- Inspect visual per QSI004- Fusion Welds

0.00



QC

Memo

0.00

Quality Control

AD 10.02.01

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

$$\Rightarrow \delta_{101010}$$

counters
+70

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 54438

December 9, 2009 11:28:02 AM



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Item ID:	D3304-041	Accept		Setup	Start	
Revision ID:					Stop	
Item Name:	Tube Assembly					
Start Date:	09/12/2009	Start Qty: 20.00		Cust Item ID:		
Required Date:	16/12/2009	Req'd Qty: 20.00		Customer:		
Reference:						

Approvals:	Process Plan:	Date:	Tooling:	Date:
	QC:	Date:	SPC (Y/N):	Date:

Run	Start	
	Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190 Powdercoat Powder Coating	Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3 Memo START TIME: 7:00AM <input type="checkbox"/> OVEN TEMPERATURE: 7:30AM <input type="checkbox"/> FINISH TIME: 3:00PM	0.00 0.00				X20	✓		
200 QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00							
210 Small Fab Small Fab	Small Fab Memo Assemble lanyard and pip pin as per Dwg D3304	0.00 0.00							

7:00AM 10/02/03

10-02-3

(20) ✓

10/02/04 (20)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 54438

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Item ID: D3304-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Tube Assembly

Start Date: 09/12/2009 Start Qty: 20.00



Cust Item ID:

Required Date: 16/12/2009 Req'd Qty: 20.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

220

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

8/10/12/09

Quality Control

count
(+20)

230

Identify as per dwg & Stock Location: 157

0.00



Packaging

Memo

0.00

Packaging

Rec'd/p (20)

240

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/02/11 JG

MF 10-2-09

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

December 9, 2009 11:28:07 AM

Page 1

Work Order ID: 54438

Parent Item: D3304-041

Parent Item Name: Tube Assembly

Comments:

Start Date: 09/12/2009

Required Date: 16/12/2009

Start Qty: 20.00

Required Qty: 20.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

CBL-1240

Purchased

No

100

Each

102.1380

20.8340



Cable

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

102.1379737

107234

102.137974

160

f

126.3000

28.2884

M304TR0.875W.065

Purchased

No



304 round tube .875 x .065w

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

MAT

126.3

110472

6.3

110680

120

210

Each

24.0000

20.0000

BLBS-0016

Purchased

No



PIP PIN

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

24

109414

24

Handwritten signature and date: 10/02/04

Handwritten quantity: 20.8340

Handwritten notes: 2.7563 (A) mm 29/12/16, 26.25 (F) DJT 09/12/13

Handwritten signature and date: 10/02/03

Handwritten quantity: 1113489 (20x)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 2

December 9, 2009 11:28:07 AM

Work Order ID: 54438



Parent Item: D3304-041



Parent Item Name: Tube Assembly

Start Date: 09/12/2009

Required Date: 16/12/2009

Comments:

Start Qty: 20.00

Required Qty: 20.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
CBL-460 Loop Sleeve		Purchased	No			210	Each	396.0000	40.0000			

9/10/02/03

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	396	
111342	210	
113002	186	

29
11

D3304-5

Manufactured No

210 Each 6.0000 20.0000



Bracket



PL 10-1-5

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	6	
40907	6	
54446	2	

6 ✓
2 ✓

54570

(12) 9/10/02/04

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

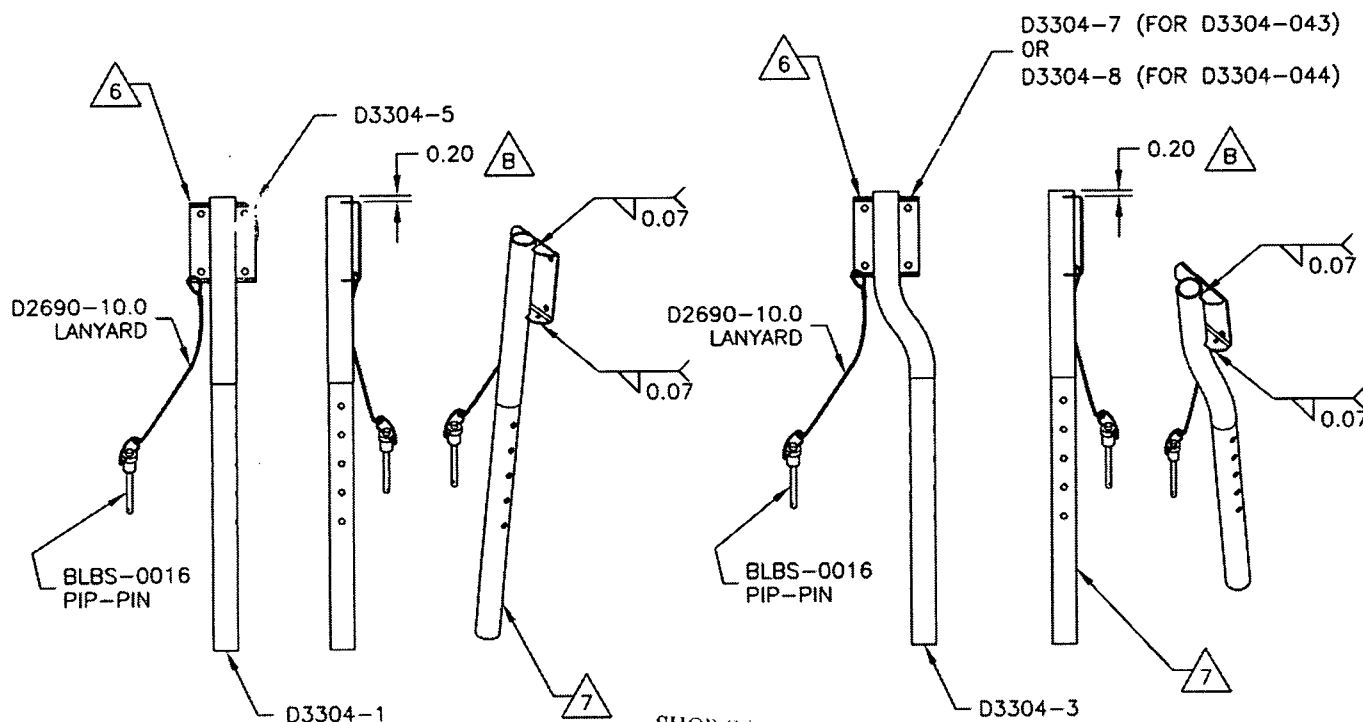
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

DESIGN	RF	DRAWN BY	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED		APPROVED		DRAWING NO. D3304
DATE	05.07.15	TITLE	TUBE ASSEMBLY	REV. B
				SHEET 1 OF 4
				SCALE 1:6
A	04.08.18	NEW ISSUE		
B	05.07.15	UPDATE DIMENSIONS: ADD D3304-7/-8		



D3304-041 TUBE ASSEMBLY

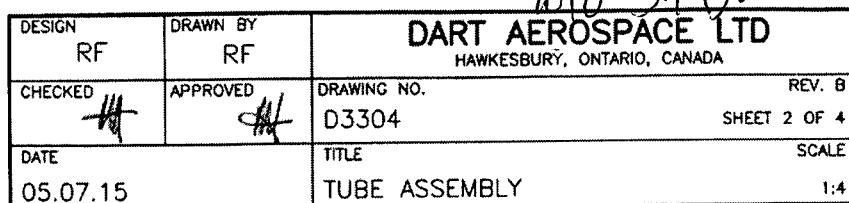
**D3304-044 TUBE ASSEMBLY (SHOWN)
D3304-043 OPPOSITE**

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED CO.
SUBJECT TO AMENDMEN
WITHOUT NOTICE
WORK ORDER
NO. 34438

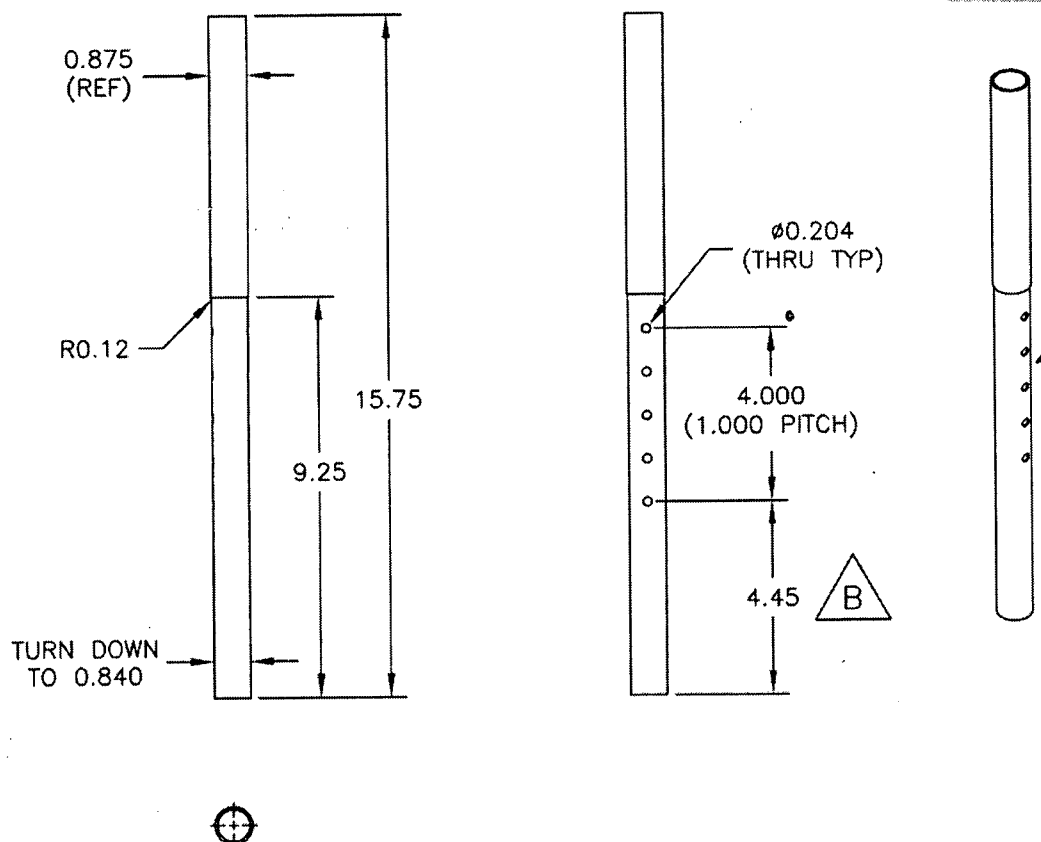
D3304-041/-043/-044 NOTES:

- 1) FINISH: POWDER COAT GREY SANDTEX (REF. 4.3.5.6) PER DART QSI 005 4.3
- 2) WELD PER DART QSI 004
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) IDENTIFY AS INDICATED USING FINE POINT PERMANENT INK MARKER "TCCA-PDA, DART AEROSPACE LTD, P/N D3304-XXX B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA04-11"
- 7) IF BEING ASSEMBLED WITH D3303-041, ADD THE FOLLOWING USING A FINE POINT PERMANENT INK MARKER: "TCCA-PDA, DART AEROSPACE LTD, P/N D412-724-XXX B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA04-11"

RELEASED
05.08.11



RELEASED
05-08-11



D3304-1 NOTES:

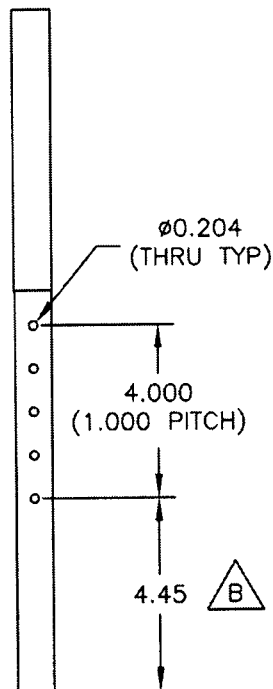
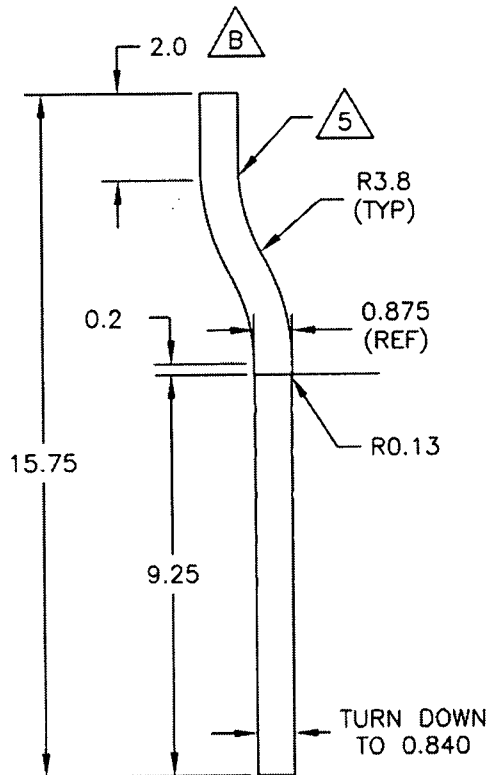
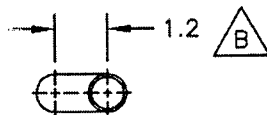
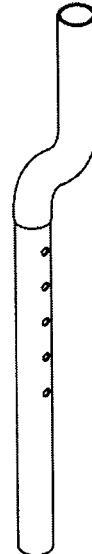
- 1) MATERIAL: AISI 304/316 STAINLESS STEEL TUBE $\varnothing 0.875 \times 0.065$ WALL
(REF. DART SPEC M304TR0.875W.065) ENSURE SEAMLESS TUBE IS USED
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015

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DART

DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3304	REV. B SHEET 3 OF 4
DATE 05.07.15		TITLE TUBE ASSEMBLY	SCALE 1:4

**RELEASED**
05-08-11 *[Signature]***D3304-3 TUBE****D3304-3 NOTES:**

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL TUBE $\phi 0.875 \times 0.065$ WALL
(REF. DART SPEC M304TRO.875W.065) ENSURE SEAMLESS TUBE IS USED
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) BEND LINES 9.625, 13.375 DIMENSIONS

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